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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/652,787
Filing Date: August 29, 2003
Appellant(s): LAYZELL ET AL.

Charles W. Griggers
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/21/2006 appealing from the Office action mailed 08/23/2006.

(1) Real Party in Interest

The Appellant's statement of the real party in interest contained in the brief is correct.

(2) Related Appeals and Interferences

The Appellant's statement of the related appeals and interferences contained in the brief is correct.

(3) Status of Claims

The Appellant's statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments

The Appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of The Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The Appellant's statement on the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence relied upon in the rejection of claims under appeal:

Geigel et al., European Patent Application, issued on 03/07/2002 (hereinafter Geigel).

Wong et al., title "A New Algorithm for Floorplan Design", published by IEEE Database in 1988, pages 101-107.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geigel et al. (Geigel), European Patent Application, and further in view of Wong et al. (Wong) with title "A New Algorithm for Floorplan Design", published by IEEE Database.

As to independent claims 1, 20-21 and 36, Geigel discloses a method of composing a page, or a portion of a page, of a document, by a programmed processor comprises:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects (page 3, lines 1-19: evaluating a grouping of the image objects for distribution into a number of pages and evaluating the x and y position coordinates of each of the images objects within a page according to fitness function parameters in a genetic engine);

establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle (page 3, lines 14-19: specifying an initial set of image page

assignments to a genetic population to produce a present set of image page assignments; page 7, lines 18-37: plurality of images (objects) are placed in album pages);

iterative process (page 3, lines 14-19 and page 6, lines 16-28 specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments by using an iterative process):

However, Geigel does not explicitly disclose a separate rectangle of a slicing structure dissection of a rectangular area; receiving and preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and finding a slicing structure arrangement of the plurality of objects with a minimized total cost.

Wong discloses in pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to include a separate rectangle of a slicing structure dissection of a rectangular area and providing a total cost of an arrangement of the plurality of objects based on one or more properties of the

arrangement. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search effectively and provide a simultaneous minimization of area and total interconnection length in the solution.

As to dependent claims 2, 9-10, and 13-14, Geigel and Wong (Geigel-Wong) disclose wherein the iterative process comprises repeated application of a genetic algorithm (Geigel, page 6, lines 16-28).

As to dependent claim 3, Geigel-Wong disclose wherein the genetic algorithm is adapted to generate mutations of existing single arrangements and crossovers between pairs of existing arrangements (Geigel, page 6, lines 16-28).

As to dependent claim 4, Geigel-Wong disclose wherein one or more of the objects in the plurality of objects are fixed either in absolute position in the arrangement, or in position relative to one or more other objects in the plurality of objects (Wong, page 103, section 5: the relative positions of the modules (objects) in different floorplan realizations are essentially fixed by the given slicing structure).

As to dependent claim 5, Geigel-Wong disclose wherein two or more of the objects in the plurality of objects are grouped together into an object group and are constrained to lie within a group rectangle of a slicing structure dissection (Geigel, Fig. 9, page 8, line 55 – page 9, line 1).

As to dependent claim 6, Geigel-Wong disclose wherein the object group is fixed either in absolute position in the arrangement, or in position relative to one or more other groups or objects in the plurality of objects (Wong, page 103, section 5: the relative positions of the modules (objects) in different floorplan realizations are essentially fixed by the given slicing structure).

As to dependent claims 7 and 11, Geigel-Wong disclose wherein the iterative process comprises conducting optimizing an arrangement of objects within a group and then optimizing an arrangement of any groups and ungrouped objects (Geigel, page 10, lines 11-29).

As to dependent claims 8 and 12, Geigel-Wong disclose wherein the iterative process comprises repeatedly conducting the steps of optimizing an arrangement of objects within a group and then optimizing an arrangement of any groups and ungrouped objects (Geigel, page 6, lines 16-28 and page 10, lines 11-29).

As to dependent claim 15, Geigel-Wong disclose wherein one of the one or more properties of the arrangement is the total area occupied by the arrangement (Wong, page 103, section 6.2 and page 104, section 8).

As to dependent claim 16, Geigel-Wong disclose wherein the plurality of objects form two or more groups, and wherein one of the one or more properties is a measure of the proximity to each other of objects which are members of the same group (Wong, page 104, section 8).

As to dependent claim 17, Geigel-Wong disclose wherein the proximity is measured by a total distance of lines joining one group member to another group member, such that every member of a group with more than one member has at least one line joined thereto (Wong, pages 102-103, sections 3 and 4).

As to dependent claim 18, Geigel-Wong disclose wherein each group member is joined by one and only one line to every other member of the same group (Wong, pages 102-103, sections 3 and 4).

As to dependent claim 19, Geigel-Wong disclose wherein one of the one or more properties is the aspect ratio of the arrangement (Wong, page 101, section 1).

As to independent claims 22, and 28-29, Geigel discloses a method of composing a page, or a portion of a page, of a document, by programmed processor comprising:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects (page 3, lines 1-19: evaluating a grouping of the image objects for distribution into a number of pages and evaluating the x and y

position coordinates of each of the images objects within a page according to fitness function parameters in a genetic engine);

establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects (page 3, lines 14-19: specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments; page 7, lines 18-37: plurality of images (objects) are placed in album pages);

However, Geigel does not explicitly disclose minimizing the function to find a minimized total area arrangement; and fitting the minimized total are arrangement to the page. Wong discloses in pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to include minimizing the function to find a minimized total area arrangement; and fitting the minimized total are arrangement to the page. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search effectively and provide a simultaneous minimization of area and total interconnection length in the solution.

As to dependent claim 23, Geigel-Wong disclose wherein the step of minimizing the function is constrained such that the minimized total area arrangement has a similar aspect ratio to the page, and wherein the step of fitting the minimized total area arrangement to the page comprises scaling the minimized total area arrangement (Wong discloses in pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to include minimizing the function to find a minimized total area arrangement; and fitting the minimized total are arrangement to the page. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search effectively and provide a simultaneous minimization of area and total interconnection length in the solution).

As to dependent claim 24, Geigel-Wong disclose wherein the step of minimizing the function is constrained such that no dimension of the minimized total area arrangement is greater than a corresponding dimension of the page, and wherein the step of fitting

the minimized total area arrangement to the page comprises separating adjacent objects according to a separation rule (Geigel, page 8, line 50 – page 9, line 23).

As to dependent claim 25, Geigel-Wong disclose wherein the function depends on the aspect ratio of the arrangement, such that minimization of the function produces a minimized total area arrangement which is a co optimization of total area and of the aspect ratio (Wong, page 101, section 1).

As to dependent claim 26, Geigel-Wong disclose wherein minimizing the function is carried out by means of an iterative process (Geigel, page 3, lines 14-19 and page 6, lines 16-28 specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments by using an iterative process).

As to dependent claim 27, Geigel-Wong disclose wherein the iterative process comprises repeated application of a genetic algorithm (Geigel, page 6, lines 16-28).

As to independent claims 30, and 34-35, Geigel discloses a method of providing a customized document having a plurality of pages comprising:

receiving a plurality of selected objects for inclusion in the document form a database of two-dimensional objects and an assignation of each of the selected objects to one of a plurality of groups, and an assignation of each of the selected objects to one of the pages of the document (page 3, lines 1-19: automated album layout method

involves the use of a set of inputs including digital images, graphics, and other 2-dimensional objects, and evaluating a grouping of the image objects for distribution into a number of pages and evaluating the x and y position coordinates of each of the images objects within a page according to fitness function parameters in a genetic engine);

producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function (page 3, lines 14-25: specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments, a layout evaluation module operable to test the present set of image placement parameters with a page fitness function to determine a page score; page 7, lines 18-37: plurality of images (objects) are placed in album pages); and

arranging the objects assigned to the said one of the pages in an arrangement (page 7, lines 18-37: plurality of images (objects) are placed in album pages).

However, Geigel does not explicitly disclose minimize the function. Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to include cost function. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search

effectively and provide a simultaneous minimization of area and total interconnection length in the solution.

As to dependent claim 31, Geigel-Wong disclose wherein the step of arranging the objects comprises dividing the page into regions and making separate arrangements in each of the regions (Geigel, page 8, line 50 – page 9, line 1).

As to dependent claim 32, Geigel-Wong disclose wherein said step of arranging the objects comprises establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area and finding a slicing structure arrangement of the plurality of objects with a minimized total cost by means of an iterative process (Geigel, page 3, lines 14-19 and page 6, lines 16-28 specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments by using an iterative process; Wong discloses in pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to

include a separate rectangle of a slicing structure dissection of a rectangular area and providing a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search effectively and provide a simultaneous minimization of area and total interconnection length in the solution).

As to dependent claim 33, Geigel-Wong disclose wherein the iterative process comprises repeated application of a genetic algorithm (Geigel, page 6, lines 16-28).

(10) Response to Arguments

In the Remarks, Appellant argued in substance that

Applicant's Claim 1

A-1) Geigel in view of Wong does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimized total cost by means of an iterative process" (see pages 10-11 of Brief).

In reply to argument **A-1**, Geigel discloses plurality of images (objects) are placed in album pages (separate rectangles) by using an iterative process (page 3, lines 14-19 and page 7, lines 18-39).

However, Geigel does not explicitly disclose a separate rectangle of a slicing structure dissection of a rectangular area and finding a slicing structure arrangement of the plurality of objects with a minimized total cost.

Wong discloses in pages 101-102 and Figure 1a that each module 1-7 (object) is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). In addition, Wong also mentioned about finding the minimum value for the cost function (page 104, right column, 4th paragraph).

B-1) "A prima facie case establishing an obviousness rejection by the proposed combination of Geigel with Wong has not been made."

In reply to argument **B-1**, to establish a prima facie case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

In this case, Geigel discloses a system and method for automatic layout of images (objects) in digital albums (rectangle structure), which is similar to arranging each module (object) in a rectangle dissection of Wong. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the

functionality or algorithms of arranging each module (object) in a rectangle dissection of Wong into the layout images in digital albums of Geigel to produce the limitation "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" of the instant application.

Second, there must be a reasonable expectation of success. The prior art can be modified or combined to reject claims as prima facie obvious as long as there is a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case, the claimed invention directed to a method of composing a page by establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area was rejected as obvious over a reference Geigel, which taught automatic layout of images (objects) in digital albums (rectangle structure), and further in view of reference Wong, which taught arranging each module (object) in a rectangle dissection. Thus, there was reasonable expectation that a process combining the prior art steps could be successfully scaled up.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. In this case, Geigel discloses a method of composing a page, or a portion of a page, of a document, by a programmed processor comprises receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects (page 3, lines 1-19: evaluating a grouping of the image

objects for distribution into a number of pages and evaluating the x and y position coordinates of each of the images objects within a page according to fitness function parameters in a genetic engine);

establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle (page 3, lines 14-19: specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments; page 7, lines 18-37: plurality of images (objects) are placed in album pages);

iterative process (page 3, lines 14-19 and page 6, lines 16-28 specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments by using an iterative process):

However, Geigel does not explicitly disclose a separate rectangle of a slicing structure dissection of a rectangular area; receiving and preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and finding a slicing structure arrangement of the plurality of objects with a minimized total cost.

Wong discloses a separate rectangle of a slicing structure dissection of a rectangular area; receiving and preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and finding a slicing structure arrangement of the plurality of objects with a minimized total cost (Wong, pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a

subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103)). In addition, Wong also mentioned about finding the minimum value for the cost function (page 104, right column, 4th paragraph).

Applicant's Claims 2-19

A-2-19) The appellant states that claims 2-19 which are dependent from independent claim 1 are allowable as a matter of law for at least the reason that dependent claims 2-19 contain all the features of independent claim 1 (see page 12 of Brief).

In reply to argument **A-2-19**, the examiner's disagreed with the appellant since claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geigel and further in view of Wong, as explained in response to arguments of claim 1 above. Therefore, claims 2-19 which are dependent from independent claim 1 are not allowable as well as a matter of law for at least the reason that dependent claims 2-19 contain all the features of independent claim 1.

B-2-19) The prior art does not teach or disclose the positioning of groups of objects (see page 13 of Brief).

In reply to argument **B-2-19**, Geigel discloses in Fig. 9 and page 8, line 55 – page 9, line 1 that page 172 has three subgroups of images 174, 176, and 178, and each of these subgroups has two images.

Applicant's Claim 20-21

A-20-21) Geigel in view of Wong does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimized total cost by means of an iterative process" (see pages 13-14 and pages 15-16 of Brief).

In reply to argument **A-20-21**, since claims 20-21 are similar to claim 1 and the argument for claim 20-21 is similar to the argument of claim 1 as well, therefore, please see the response to arguments of claim 1 above.

Applicant's Claims 22, 28 and 29

A-22-28-29) Geigel in view of Wong does not disclose, teach, or suggest at least "establishing, for the plurality of object, evaluation of a function to represent a total area of an arrangement of the plurality of object; minimizing the function to find a minimized total area arrangement; and fitting the minimized total area arrangement to the page" (see page 18-23 of Brief).

In reply to argument **A-22-28-29**, Geigel discloses a method of composing a page, or a portion of a page, of a document, by programmed processor comprising:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects (page 3, lines 1-19: evaluating a grouping of the image objects for distribution into a number of pages and evaluating the x and y position coordinates of each of the images objects within a page according to fitness function parameters in a genetic engine);

establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects (page 3, lines 14-19: specifying an initial set of image page assignments to a genetic population to produce a present set of image page assignments; page 7, lines 18-37: plurality of images (objects) are placed in album pages);

However, Geigel does not explicitly disclose minimizing the function to find a minimized total area arrangement; and fitting the minimized total are arrangement to the page. Wong discloses in pages 101-102 and Figure 1a that each module 1-7 is arranged in rectangle dissection which is a subdivision of a given rectangle by horizontal and vertical line segments into a seven of non-overlapping rectangles, and a slicing structure is a rectangle dissection that can be obtained by recursively cutting rectangles into a smaller rectangles (see Figure 1a). Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103). In addition, Wong also mentioned about finding the minimum value for the cost function (page 104, right column, 4th paragraph).

B-22-28-29) The proposed combination of Geigel and Wong is improper and not obvious (no suggest for combine the prior art) (see page 19 of Brief).

In reply to argument **B-22-28-29**, In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Geigel discloses a system and method for automatic layout of images (objects) in digital albums (rectangle structure), which is similar to arranging each module (object) in a rectangle dissection of Wong. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the functionality or algorithms of arranging each module (object) in a rectangle dissection of Wong into the layout images in digital albums of Geigel to produce the limitation "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" of the instant application.

Applicant's Claims 23-27

A-23-27) The appellant states that claims 23-27 which are dependent from independent claim 22 are allowable as a matter of law for at least the reason that dependent claims 23-27 contain all the features of independent claim 22 (see page 20 of Brief).

In reply to argument **A-23-27**, the examiner's disagreed with the appellant since claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geigel and further in view of Wong, as explained in response to arguments of claim 22 above. Therefore, claims 23-27 which are dependent from independent claim 22 are not allowable as well as a matter of law for at least the reason that dependent claims 23-27 contain all the features of independent claim 22.

Applicant's Claims 30, 34 and 35

A-30-34-35) Geigel in view of Wong does not disclose, teach, or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the object assigned to that page, evaluation of the function, and arranging the objects assigned to said one of the pages in an arrangement such as to minimize the function" (see page 25 and pages 28-32 of Brief).

In reply to argument **A-30-34-35**, Geigel discloses producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function (page 3, lines 14-25: specifying

an initial set of image page assignments to a genetic population to produce a present set of image page assignments, a layout evaluation module operable to test the present set of image placement parameters with a page fitness function to determine a page score; page 7, lines 18-37: plurality of images (objects) are placed in album pages); and

arranging the objects assigned to the said one of the pages in an arrangement (page 7, lines 18-37: plurality of images (objects) are placed in album pages)

However, Geigel does not explicitly disclose minimize the function.

Wong also discloses computing cost of rectangles (objects) placed in the area of the floorplan design rectangle by using the cost function (page 103).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wong and Geigel to include cost function. Wong suggests that the algorithm for floorplan design would enable us to carry out the neighborhood search effectively and provide a simultaneous minimization of area and total interconnection length in the solution.

B-30-34-35) The prior art does not teach or disclose the positioning of groups of objects (see page 13 of Brief).

In reply to argument B-30-34-35, Geigel discloses in Fig. 9 and page 8, line 55 – page 9, line 1 that page 172 has three subgroups of images 174, 176, and 178, and each of these subgroups has two images.

Applicant's Claims 31-33

The argument of claims 31-33 is similar to the arguments of claims 2-19 and 23-27, which are already addressed in response to arguments of claims 2-19 and 23-27 above.

Applicant's Claims 36

The limitations of claim 36 are similar to the limitations of claim 1, and the arguments of claim 36 are similar to the arguments of claim 1 as well. Therefore, please see the response to arguments of claim 1 above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is respectfully submitted that the rejections should be sustained.

Respectfully Submitted,

CN

Chau Nguyen

William L. Bashore

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